

### **REMARKS**

This amendment is responsive to the Office Action of February 19, 2009. Reconsideration and allowance of **claims 3-4, 6-11 and 13** are requested.

#### **The Office Action**

**Claims 3-11 and 13** were rejected under 35 U.S.C. 112, second paragraph.

**Claims 3-20** were rejected under 35 U.S.C. 102 (b) as being anticipated by Englund et al. (U.S. Patent No. 5,197,474).

**Claims 3-4, 7-9, 11, and 13** were rejected under 35 U.S.C. 102(e) as being anticipated by Krockel et al. (U.S. Patent Application Publication 2002/0138001).

**Claims 3-9, 11, and 13** were rejected under 35 U.S.C. 102(e) as being anticipated by Young (U.S. Patent No. 6,529,004).

#### **The Amendment Should be Entered**

Applicant respectfully requests that the Examiner enters the present amendment.

First, the finality of the Office Action is premature because the Examiner made a new ground of rejection relative to unamended subject matter. The claims as originally filed (note for example original claim 6) used the "relative to" language. The present Office Action for the first time alleges that this phrase is indefinite in the sense of 35 U.S.C. 112. Because the new 35 U.S.C. 112 rejection was not necessitated by the prior Amendment, it is submitted that the finality of this Office Action is premature.

Second, the Applicant submits that this Amendment After Final Rejection places this application in condition for allowance by amending claims in a manner that is believed to render all pending claims allowable over the cited art and/or at least place this application in better form for appeal.

Third, this Amendment reduces the issues on appeal by addressing the Examiner's new 35 U.S.C. 112 ground of rejection. This Amendment addresses the Examiner's request to particularly point out and distinctly claim the orientation or directional frame in reference of the "relative to" limitation in **claims 4, 6, 9, 11, and 13**.

In order to try to reach an agreement with the Examiner, **claim 6** was amended to introduce limitations of the claim in a different order to show the distinctions over the prior art more clearly. The issues were not earlier presented because Applicant believed that the prior responses placed this application in condition for allowance, for at least the reasons discussed in those responses. Accordingly, entry of the present Amendment, as an earnest attempt to advance prosecution is requested.

### **Background**

The present application is directed to an RF system for a magnetic resonance imaging device that comprises a RF transmitter coil subsystem and a RF receiver coil subsystem. The RF receiver coil subsystem comprises at least one first coil element and at least one second coil element. The first coil element is movably attached to the main magnet of the magnetic resonance imaging device separate from and positioned below a support or bed on which an object to be analyzed is placed. The second coil element is assigned to an object that is to be analyzed by the magnetic resonance imaging device.

The above description of the present application is presented to the Examiner as background information to assist the Examiner in understanding the application. The above description is not used to limit the claims in any way.

### **35 U.S.C. 112**

Applicant respectfully submits that “relative to” particular points out and distinctly claims the subject matter which Applicant regards as the invention. More specifically, the limitations “the support or bed that is movable relative to the at least one first coil element” or “at least one first coil element that is movable relative to the main magnet system” are definite in that they distinctly claim that one object is able to move in relation to another object in any orientation or direction frame that could be ascertained from the specification and limitation language. The Applicant need not further limit the claim by setting forth a specific directional frame or orientation for the relative movement between the two objects.

In an attempt to advance prosecution, the claims have been amended to limit the relative movement to movement at least in the longitudinal orientation or directional frame in the reference to the “relative to” limitations.

**The Claims Distinguish Patentably  
Over the References of Record**

**Claims 3-11 and 13** are not anticipated by Englund et al., Krockel, or Young. These rejections are hereby traversed.

More specifically, regarding **claim 6**, Englund et al., Krockel, and Young do not disclose at least one first coil element is movably attached to the main magnet system separate from a support or bed on which a object to be analyzed is placed and is positioned below a the support or bed. None of Englund et al., Krockel, and Young disclose a RF system in which a first coil element is movably attached to the main magnet system and separate from the support or bed on which an object to be imaged is placed.

Englund et al., Krockel, and Young all disclose first coil elements being secured and/or mounted to the support or bed on which the patient to be imaged is placed. Englund et al discloses that all the coils are mounted on the bed at the same location and there is just one positioning method which facilitates the operation of the apparatus (Col. 4 lines 56-58), Krockel discloses that both the first and second reception coils are attached to the movable carrier and patient support in fixed positions (Paragraphs [0025] and [0027]), and Young disclose that the coil is secured to the patient support (Abstract). Neither Englund et al., Krockel, nor Young disclose a first coil element that is movably attached to a main magnet system which is separate from and positioned below a support or bed.

The Examiner concedes that both Englund et al. and Krockel disclose a first coil element that is built-in or permanently fixed to the bed as a internal part of the patient support base that moves in and out of the magnetic resonance imager (Office Action Mailed February 19, 2009 Paragraphs 13 and 22). Additionally, Examiner concedes in those same sections that a second coil element is located is assigned to an object to be analyzed. The first coil elements of Englund et al. and Krockel are permanently attached to the bed or support as an internal part of the bed or support. Englund et al. and Krockel do not disclose that the first coil element is movably attached to the main magnet system and is located below and movable relative to the support or bed. The Examiner also concedes that Young discloses that all of the coil components are built in as part of the patient support that moves axially with the patient support when the patient enter the bore of the magnet (Office Action Mailed February 19, 2009 Paragraphs 33). Young does not disclose a first coil

element that is attached to the main magnet system below the patient bed or support and moveable relative thereto. Additionally, Young does not disclose that the first coil element is movably mounted to the main magnet system.

Accordingly it is submitted that independent **claim 6** and **claims 3-4 and 7-10** that depend therefrom distinguish patentable over the references of record.

**Claim 3** calls for the at least one first coil elements is designed as part of a built-in system body coil. Neither Englund et al., Krockel, nor Young disclose a first coil element being built in the system body coil of a magnetic resonance imager. Englund et al, Krockel, and Young disclose first coil elements being an internal part of the patient support or bed.

**Claim 4** calls for the support or bed is longitudinally movable relative to the at least one first coil element. Englund et al, Krockel, and Young disclose the at least one first coil element are attached and longitudinally fixed to the patient support or bed. Englund et al., Krockel, and Young do not disclose the support or bed are movable relative to the at least one first coil element attached to the main magnet system.

**Claim 9** calls for at least one second coil element is longitudinally movable together with the support or bed on which the object to be analyzed is placed longitudinally relative to the at least one first coil element. Englund et al, Krockel, and Young disclose that both the at least one first coil element and the at least one second coil element are attached and longitudinally fixed to the patient support or bed. Englund et al., Krockel, and Young do not disclose that at least one second coil element and the support or bed are movable relative to the at least one first coil element attached to the main magnet system.

**Claim 11** calls for at least one first coil element which is longitudinally movably attached to the main magnet system and is separate from and below the bed or support which bed or support moves independently of the at least one first coil element. Englund et al., Krockel, and Young all disclose coil elements being secured and/or mounted to the support or bed on which the patient to be imaged is placed. Neither Englund et al., Krockel, nor Young disclose a first coil element that is positioned below and separate from the bed or support and movable mounted to the main magnet system.

Regarding **claim 13**, Englund et al., Krockel, and Young do not disclose a first RF coil structure is positioned in the bore below the support and is longitudinally

movably mounted to the main magnet system, the support being longitudinally movable relative to the first RF coil structure. Englund et al., Krockel, and Young all disclose first RF coil structures being secured and/or mounted to the support or bed on which the patient to be imaged is placed. Additionally, Englund et al, Krockel, and Young disclose the first RF coil structure being attached and longitudinally fixed to the patient support or bed. None of Englund et al., Krockel, and Young disclose a RF system comprising a first RF coil structure positioned below the bed or support in the bore of the magnetic resonance imager. Additionally, Neither Englund et al., Krockel, nor Young disclose that the first RF coil structure is longitudinally movable mounted to the main magnet system and that the support is longitudinally movable relative to the first RF coil structure.

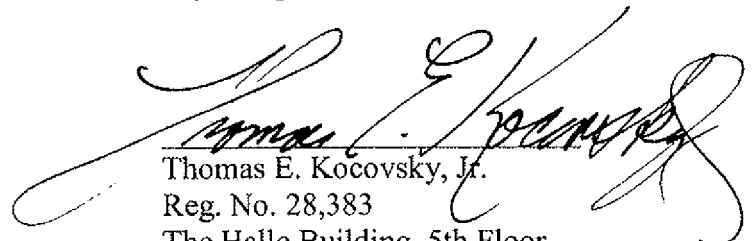
### CONCLUSION

For the reasons set forth above, it is submitted that **claims 3-4, 6-11 and 13** (all claims) distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case(s), he is requested to telephone Thomas Kocovsky at 216.363.9000.

Respectfully submitted,

Fay Sharpe LLP

A large, stylized handwritten signature in black ink, which appears to read "Thomas E. Kocovsky, Jr.", is written over the typed name and address.

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